

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IV

Page 1 of 1

EPA ID: KYD980557011 Site Name: KENTUCKY LEAD & OIL CO

State ID:

Alias Site Names: KENTUCKY LEAD & OIL CO

City: LOUISVILLE

Refer to Report Dated:

County or Parish: JEFFERSON

State: KY

Report Developed By:

Report Type: PRELIMINARY ASSESSMENT 001

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1. Further Remedial Site Assessment Under CERCLA (Superfund) is not required because:

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2. Further Assessment Needed Under CERCLA:

Low priority for further assessment

Discussion/Rationale:

Site Decision Made by:

Signature: _____

Date: 10/01/1982

Site Short Name:	KENTUCKY LEAD & OIL CO
Owner Operator Type:	Other
Operational Status:	
Federal Facility Indicator:	Not a Federal Facility
Federal Agency Owner:	
Responsible Federal Agency:	

Archive Ind:	<input type="checkbox"/>
Archive Date:	03/14/1989
NPL Status:	Not on the NPL
RCRA Site:	
Primary RPM:	None Assigned
Primary OSC:	None Assigned

Non-NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information	Date:	03/14/1989
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Description:



1927 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710

received
DEC 20 1988

#1796

C-586-12-8-74

December 9, 1988

Mr. Narindar Kumar
Site Investigation and Support Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Date: _____
Site Disposition: _____
EPA Project Manager: _____

Subject: Preliminary Assessment Reassessment
Kentucky Lead and Oil Company
Louisville, Jefferson County, Kentucky
EPA No. KYD980557011
TDD No. F4-8805-40

Dear Mr. Kumar:

FIT 4 conducted a preliminary assessment reassessment of the Kentucky Lead and Oil Company site in Louisville, Jefferson County, Kentucky. The reassessment included a review of EPA file material, a target survey, and an offsite reconnaissance.

The Kentucky Lead and Oil Company was located at 28 North Street between Main and River streets in Louisville, Kentucky. It began operation in 1865 as Haslett, Leonard and Company. In 1870 the company's name changed to Kentucky Lead and Oil Company. The company operated from 1865 to 1892 as a manufacturer of lead and oil for paints. In the late 1800's the city of Louisville renumbered its streets, thereby changing the address of Kentucky Lead and Oil Company to 101 Ninth Street (Ref. 1). The Kentucky Lead and Oil Company no longer exists. River Street remains in Louisville but no longer extends to Ninth Street. The location where Kentucky Lead and Oil once stood is now occupied by Interstate 64 (Refs. 2, 3).

Jefferson County lies within both the Ohio River Valley and the Bluegrass regions of north-central Kentucky, and it is on the western flank of the Cincinnati Arch within the Central Lowlands Physiographic Province. The net precipitation for this area is 11.8 inches per year (Ref. 3). The topography of the area ranges from nearly flat to fairly rugged. The majority of the county is drained by small tributaries of the Ohio River (Ref. 4). The present valley of the Ohio River was cut into the shale and limestone bedrock during glacial times. The rock valley was filled with alluvium of Quaternary age, which underlies the Ohio River flood plain to a maximum depth of 130 feet (Ref. 5).

The alluvium in the Ohio River flood plain is the principal aquifer and, next to the river, is the second most important source of water in the area. The aquifer is comprised of outwash sand and gravel of Pleistocene age ranging from 0 to 100 feet in thickness, overlain by a blanket of silt and clay as much as 40 feet thick. Very thin deposits of clay and silt of Recent age cover parts of the flood plain. The entire thickness of alluvium, known as the Ohio River Valley Series, is considered a single hydrologic unit. This aquifer supplies many industrial wells in the area and has an average transmissivity of 68,500 gpd/ft (Refs. 5, 6). The alluvial aquifer is hydraulically connected with the Ohio River in this

Mr. Narindar Kumar
Environmental Protection Agency
TDD No. F4-8805-40
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area. Infiltration from the Ohio River and flow through the limestone valley wall are major contributors of recharge to the aquifer. Groundwater flow is generally toward the Ohio River (Ref. 5).

The Louisville Limestone of Silurian age and the Jeffersonville and Sellersburg Limestones of Devonian age underlie the alluvium. These formations are considered a single aquifer. Water in this aquifer is contained in and moves along interconnected cracks and solution channels (Ref. 5). The limestone beneath the flood plain is hydraulically connected with the deposits of sand and gravel, from which a continuing source of recharge is available. In the Bluegrass region, the limestone supplies small quantities of water to domestic wells, but beneath the Ohio River alluvium it is capable of yielding large quantities of water, mostly for industrial use (Ref. 5).

The city of Louisville draws its water supply from the Ohio River. The location of the surface water intake point is approximately 2 miles upriver from the Kentucky Lead and Oil Company's location (Ref. 8). The only surface water intake downstream is located approximately 2 miles west, across the Ohio River at New Albany, Indiana. This water system serves 12,286 customers (Ref. 9).

There are approximately 700 private wells in Jefferson County. The average depth of the wells is 75 to 100 feet. However, many wells are in the 50 to 55-foot range (Ref. 10). There are no private wells within a 4-mile radius of the Kentucky Lead and Oil Company site (Ref. 11).

The nearest school to the facility's location is the Lowell School. It is approximately 3,000 feet southwest of Kentucky Lead and Oil. The Ohio River is used for boating, recreation, and fishing throughout the year. Surface water runoff would flow approximately 50 feet north into the Ohio River.

Based on the above referenced materials and the enclosures within, it is recommended that no further remedial action be planned for this facility. If you have any questions concerning this assessment, please contact me at NUS Corporation.

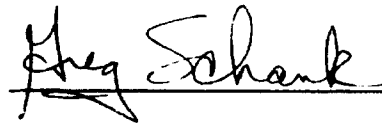
Very truly yours,


John A. McKeown
Project Manager

JAM/kw

cc: Scott Gardner

Approved:



REFERENCES

1. L. Dale Patterson, University Archives and Records Center at the University of Louisville, communication with John McKeown, NUS Corporation, September 6, 1988. Subject: Site History of Kentucky Lead and Oil Company.
2. NUS Corporation Field Logbook No. F4-982 for Kentucky Lead and Oil Company, TDD No. F4-8805-40, pp. 1-3. Documentation of facility reconnaissance, August 1, 1988.
3. Potential Hazardous Waste Site Preliminary (EPA Form 2070-2), Site information and assessment done by J. Terry Smoak. Subject: Kentucky Lead & Oil Company.
4. U.S. Department of Commerce, Climatic Atlas of the United States. (Washington D.C.: GPO, June 1968) Reprint: 1983, National Oceanic and Atmospheric Administration.
5. L.M. McCary, "Availability of Ground Water for Domestic Use in Jefferson County, Kentucky," United States Geological Survey Hydrologic Investigations Atlas HA2, (1956), p. 1.
6. E.A. Bell, "Summary of Hydrologic Conditions of the Louisville Area Kentucky," U.S. Geological Survey Water-Supply Paper 1819-C, (1966), p. 4-18.
7. J.T. Gallaher and W.E. Price, Jr., "Hydrology of the Alluvial Deposits in the Ohio River Valley in Kentucky. U.S. Geological Survey Water-Supply Paper 1818, (1966), p. 50.
8. Dave Phillips, Kentucky River Standards and Specifications, communication with Carol Northern, NUS Corporation, August 4, 1988. Subject: Water usage of the Ohio River.
9. Greg Moranda, Indiana Department of Water Management, communication with John McKeown, NUS Corporation, September 15, 1988. Subject: City of New Albany, Ind. water-supply intake.
10. Ron Brooks, Sanitarian, Jefferson County Health Department, communication with Carol Northern, NUS Corporation, August 4, 1988. Subject: Private wells in Jefferson County.
11. U.S. Geological Survey, 7.5 minute series Topographic Quadrangle Maps of Indiana and Kentucky: Jeffersonville, Ind-KY 1965 (Photorevised 1971), New Albany, Ind.-KY 1965 (P.R. 1971), Louisville East KY 1982 (P.R. 1987), Louisville West 1982 (P.R. 1987); scale: 1:24,000.

HAZARD RANKING SYSTEM SCORING SUMMARY

FOR

KENTUCKY LEAD AND OIL
EPA SITE NUMBER KY0990537011
LOUISVILLE
JEFFERSON COUNTY, KY
EPA REGION: 4

SCORE STATUS: IN PREPARATION

SCORED BY JOHN MCKEOWN
OF NUS CORPORATION
ON 12/09/88

DATE OF THIS REPORT: 12/09/88
DATE OF LAST MODIFICATION: 12/09/88

GROUND WATER ROUTE SCORE :	0.00
SURFACE WATER ROUTE SCORE:	15.27
AIR ROUTE SCORE :	0.00
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MIGRATION SCORE :	8.83

HRS GROUND WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	REN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0
2. ACUTE CHARACTERISTICS			
DEPTH TO WATER TABLE	20 FEET		
DEPTH TO BOTTOM OF WASTE	10 FEET		
DEPTH TO AQUIFER OF CONCERN	10 FEET	3	3
PRECIPITATION	46.8 INCHES		
EVAPORATION	35.0 INCHES		
NET PRECIPITATION	11.8 INCHES	2	2
PERMEABILITY	1.0×10^{-8} CM/SEC	2	2
PHYSICAL STATE		3	3
TOTAL ACUTE CHARACTERISTICS SCORE:			10
3. CONTAINMENT		3	3
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE: LEAD			12
WASTE QUANTITY	CUBIC YDS	9999999	
	DRUMS	0	
	GALLONS	0	
	TONS	0	
TOTAL	9999999 CU. YDS	8	8
TOTAL WASTE CHARACTERISTICS SCORE:			20
5. TARGETS			
GROUND WATER USE		0	0
DISTANCE TO NEAREST WELL AND	30000 FEET		
	MATRIX VALUE	0	0
TOTAL POPULATION SERVED	0 PERSONS		
NUMBER OF HOUSES	0		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			0
GROUND WATER ROUTE SCORE (Sgw) = 0.00			

HRS SURFACE WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0
2. ROUTE CHARACTERISTICS			
SITE LOCATED IN SURFACE WATER	NO		
SITE WITHIN CLOSED BASIN	NO		
FACILITY SLOPE	30.0 %		
INTERVENING SLOPE	30.0 %	3	3
24-HOUR RAINFALL	2.6 INCHES	2	2
DISTANCE TO DOWN-SLOPE WATER	1 FEET	3	6
PHYSICAL STATE	3		3
TOTAL ROUTE CHARACTERISTICS SCORE:			14
3. CONTAINMENT	3		3
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE:LEAD			18
WASTE QUANTITY CUBIC YDS	9999999		
DRUMS	0		
GALLONS	0		
TONS	0		
TOTAL	9999999 CU. YDS	8	8
TOTAL WASTE CHARACTERISTICS SCORE:			26
5. TARGETS			
SURFACE WATER USE		3	9
DISTANCE TO SENSITIVE ENVIRONMENTS		0	0
COASTAL WETLANDS	NONE		
FRESH-WATER WETLANDS	NONE		
CRITICAL HABITAT	NONE		
DISTANCE TO STATIC WATER	> 3 MILES		
DISTANCE TO WATER SUPPLY INTAKE	42240 FEET		
AND MATRIX VALUE		0	0
TOTAL POPULATION SERVED	46687		
NUMBER OF HOUSES	0		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	12286		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			9

SURFACE WATER ROUTE SCORE (Ssw) = 15.27

HRS AIR ROUTE SCORE

<u>CATEGORY/FACTOR</u>	<u>RAW DATA</u>	<u>ASN. VALUE</u>	<u>SCORE</u>
1. OBSERVED RELEASE	NO	0	0
2. WASTE CHARACTERISTICS			
REACTIVITY:			
INCOMPATIBILITY		MATRIX VALUE	
TOXICITY			
WASTE QUANTITY	CUBIC YARDS		
	DRUMS		
	GALLONS		
	TONS		
	TOTAL		
TOTAL WASTE CHARACTERISTICS SCORE:			N/A
3. TARGETS			
POPULATION WITHIN 4-MILE RADIUS			
0 to 0.25 mile			
0 to 0.50 mile			
0 to 1.0 mile			
0 to 4.0 miles			
DISTANCE TO SENSITIVE ENVIRONMENTS			
COASTAL WETLANDS			
FRESH-WATER WETLANDS			
CRITICAL HABITAT			
DISTANCE TO LAND USES			
COMMERCIAL/INDUSTRIAL			
PARK/FOREST/RESIDENTIAL			
AGRICULTURAL LAND			
PRIME FARMLAND			
HISTORIC SITE WITHIN VIEW?			
TOTAL TARGETS SCORE:			N/A

AIR ROUTE SCORE (Sa) = 0.00

HAZARD RANKING SYSTEM SCORING CALCULATIONS
FOR
SITE: KENTUCKY LEAD AND OIL
AS OF 12/09/88

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GROUND WATER ROUTE SCORE

ROUTE CHARACTERISTICS		13	
CONTAINMENT	X	3	
WASTE CHARACTERISTICS	X	26	
TARGETS	X	0	
		<hr/>	
		=	0 / 57,330 X 100 = 0.00 = S_{gw}

SURFACE WATER ROUTE SCORE

ROUTE CHARACTERISTICS		14	
CONTAINMENT	X	3	
WASTE CHARACTERISTICS	X	26	
TARGETS	X	9	
		<hr/>	
		=	9828 / 64,350 X 100 = 15.27 = S_{sw}

AIR ROUTE SCORE

OBSERVED RELEASE		0 / 35,100 X 100 = 0.00 = S_{air}
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SUMMARY OF MIGRATION SCORE CALCULATIONS

	<u>S</u>	<u>S²</u>
GROUND WATER ROUTE SCORE (S_{gw})	0.00	0.00
SURFACE WATER ROUTE SCORE (S_{sw})	15.27	233.17
AIR ROUTE SCORE (S_{air})	0.00	0.00
$S_{gw}^2 + S_{sw}^2 + S_{air}^2$		233.17
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_{air}^2}$		15.27
$S_M = \sqrt{S_{gw}^2 + S_{sw}^2 + S_{air}^2} / 1.73$		8.83

RECONNAISSANCE CHECKLIST FOR HRS2 CONCERNS

Instructions: Obtain as much "up front" information as possible prior to conducting fieldwork. Complete the form in as much detail as you can, providing attachments as necessary. Cite the source for all information obtained.

Site name: Kentucky Lead and Oil Company
City, County, State: Louisville, Jefferson County, KY

EPA ID No.: KYD980557011

Person responsible for form: John McKee

Date: August 1, 1987

Air Pathway N/A

Describe any potential air emission sources onsite: None

Identify any sensitive environments within 4 miles: possible fish in the river.

Identify the maximally exposed individual (nearest residence or regularly occupied building - workers do count): N/A

Groundwater Pathway

Identify any areas of karst terrain: N/A

Identify additional population due to consideration of wells completed in overlying aquifers to the AOC: N/A

Do significant targets exist between 3 and 4 miles from the site? Yes - City of New Albany, Ind, and Louisville, KY water intakes. (Not groundwater, however)

Is the AOC a sole source aquifer according to Safe Drinking Water Act? (i.e. is the site located in Dade, Broward, Volusia, Putnam, or Flagler County, Florida) No

Surface Water Pathway

Are there intakes located on the extended 15-mile migration pathway? Yes, New Albany water intake along Ohio river.

Are there recreational areas, sensitive environments, or human food chain targets (fisheries) along the extended pathway? Yes, fishing and boating occurs on the Ohio river

Onsite Exposure Pathway

Is there waste or contaminated soil onsite at 2 feet below land surface or higher? possibly, but unlikely

Is the site accessible to non-employees (workers do not count)? Yes

Are there residences, schools, or daycare centers onsite or in close proximity? No

Are there barriers to travel (e.g., a river) within one mile? yes - the Ohio river to the north.